

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing Of Claims:

1.-13. (Canceled)

14. (New) A device for determining at least one of a wheel geometry and an axle geometry of a motor vehicle in an inspection room, comprising:

an optical measuring apparatus having at least one image-taking device for recording a marking device including at least one body feature and one reference feature system;

an evaluating device, positions of reference features in the inspection room being known in the evaluating device, and the recording of the marking device taking place during travel of the motor vehicle, wherein:

the image-taking device is connected via a swivel joint to a wheel rim of a wheel that is to be measured,

the image-taking device follows a rotational motion of the wheel,

an optical axis of the image-taking device is always aligned substantially perpendicular to a roadway plane,

an axis of rotation of the swivel joint is aligned in all wheel positions substantially parallel to the roadway plane,

the reference feature system is situated substantially in the roadway plane in a field of view of the image-taking device,

the at least one body feature is always situated in the field of view and follows a movement of the motor vehicle, and

a position of at least one of an axis of rotation of the wheel and a plane of rotation of the wheel is able to be determined on the basis of the position of a wheel feature to be ascertained.

15. (New) The device as recited in Claim 14, wherein:

the wheel feature is identified by a point on the wheel that is determinable in accordance with a focal length and a corrected distortion of an objective of the image-taking device, the positions of at least three of the reference features of the reference feature system, and a relative position of the image-taking device with respect to the axis of rotation of the swivel joint.

16. (New) The device as recited in Claim 14, wherein:
 - a determination of the plane of rotation of the wheel is made by recording a path of rotation of the wheel, and
 - a translational movement of the motor vehicle, which is ascertained by a path of motion of the at least one body feature, is eliminated.
17. (New) The device as recited in Claim 14, wherein:
 - the reference feature system includes a carrier unit whose positioning in the inspection room may be freely configured, and on which are provided the reference features in the form of one of reference structures and specially mounted reference features.
18. (New) The device as recited in Claim 14, wherein:
 - at least one of the reference feature system and the at least one body feature are developed as optically recordable marks, and
 - the image-taking device includes a camera.
19. (New) The device as recited in Claim 18, wherein:
 - the optically recordable marks are formed by light sources including one of light-emitting diodes, lamps, and light exit openings of optical fibers.
20. (New) The device as recited in Claim 19, wherein at least a part of the light sources lights up synchronously with a camera shutter of the image-taking device.
21. (New) The device as recited in Claim 14, wherein at least one of the reference feature system and the at least one body feature bears a coding that is recordable by the image-taking device.
22. (New) The device as recited in Claim 21, wherein the coding is formed by showing patterns that light up in temporal sequence.
23. (New) The device as recited in Claim 21, wherein:
 - the coding is formed by lighting up differently colored ones of the light sources in temporal sequence, and
 - the image-taking device is a color camera.

24. (New) A device for determining at least one of a wheel geometry and an axle geometry of a motor vehicle in an inspection room, comprising:

an optical measuring apparatus including at least one first image-taking device for recording a marking device including one reference feature system;

an evaluating device, a position of reference features in the inspection room being known in the evaluating device, and a recording of the marking device taking place during travel of the motor vehicle, wherein:

the at least one first image-taking device is connected via a swivel joint to a wheel rim of a wheel that is to be measured, and follows a rotational motion of the wheel,

an optical axis of the at least one first image-taking device is always aligned substantially perpendicular to a roadway plane,

an axis of rotation of the swivel joint is aligned in all wheel positions substantially parallel to the roadway plane,

at the motor vehicle there is positioned an additional image-taking device that is operable independently of the at least one first image-taking device and that records the reference feature system, and

a position of at least one of the axis of rotation of the wheel and the plane of rotation of the wheel is able to be determined on the basis of a position of a wheel feature that is to be ascertained.

25. (New) The device as recited in Claim 24, wherein the reference feature system is situated substantially in the roadway plane, in a field of view of the at least one first image-taking device and of the additional image-taking device.

26. (New) The device as recited in Claim 24, wherein the reference feature system is situated parallel to the roadway plane and above the motor vehicle in a field of view of the at least one first image-taking device and of the additional image-taking device.